

REMARKS

Upon entry of the present amendment, claims 1-8 will have been amended to correct informalities in the claim language and to more clearly define the invention, while not substantially affecting or narrowing the scope of these claims. For example, the preamble of each of the independent claims, claims 1-4, will have been amended to clarify that the plurality of projected portions formed along an arc are separated by a plurality of cut-away portions. Applicants respectfully submit that all pending claims are now in condition for allowance.

Furthermore, upon entry of the present amendment, several drawings will have been amended to include the legend –Prior Art— in Figs. 8, 9(a), 9(b) and 9(c) to indicate that these figures illustrate that which is old. Corrected formal versions of Figs. 8, 9(a), 9(b) and 9(c), which incorporate the amendments, are being submitted as part of the present Reply. No new matter has been introduced in the application by the amended drawings.

In the above-referenced Official Action, the Examiner rejected claims 1-5 and 7 under 35 U.S.C. § 103(a) as being unpatentable over DOKE et al. (U.S. Patent No. 6,134,342) in view of MAHDAVIEH et al. (U.S. Patent No. 5,345,514). The Examiner rejected claims 6 and 8 under 35 U.S.C. § 103(a) as being unpatentable over DOKE et al. in view of MAHDAVIEH et al., in further view of KNOLLENBERG et al. (U.S. Patent No. 5,493,123). Applicant respectfully traverses these rejections, at least for the reasons stated below.

DOKE et al., the primary reference on which the Examiner relied in rejecting all of the claims, actually provide an example of the prior art identified in the background section of the present application. In particular, the objects being inspected in DOKE et al. (i.e., contact lenses) must be specifically aligned or placed in the same position with respect to a mask, or other reference image data in order to enable inspection. *See, e.g.*, Specification, p.3, lines 3-13. This positioning requires at least two “position marks” on the lens container to ensure that the inspection object image and the mask image are overlapped for proper subtraction of images. *See, e.g.*, col. 2, line 60 - col.

3, line 6; Fig. 2B. The present invention does not require such alignment.

With respect to independent claims 1-4, the Examiner inaccurately relied on Fig. 9 and col. 10, lines 29-30 of DOKE et al. to teach determining an arc circumscribing a tip of each of the plurality of projected portions of the object. First, the DOKE et al. patent discloses an apparatus for inspecting external appearance of contact lenses, which clearly lack “a plurality of like projected portions formed along an arc with a predetermined pitch,” as recited in the preamble of the pending independent claims. Therefore, DOKE et al. obviously do not teach or suggest a tip of each of the (nonexistent) projected portions or an arc circumscribing each tip. Second, the portions of DOKE et al. cited by the Examiner actually show determining a “circumscribing rectangle,” generally based on the outer radius of the contact lens, not an “arc,” as recited in the independent claims.

The Examiner also inaccurately asserted that the “cut-away portion” is the area between the outer edge of the contact lens and the circumscribing rectangle in DOKE et al. However, the cut-away portion in the disclosed embodiment actually refers to the open space between the projected portions (e.g., space 1b between two adjacent teeth 1a of the sprocket), which is not even suggested by DOKE et al. As stated above, the independent claims have been amended to clarify the cut-away portions. Accordingly, withdrawal of the rejections based on any combination including the DOKE et al. reference is respectfully requested.

Furthermore, the Examiner admitted that DOKE et al. do not teach comparing the area of each of the overlapping regions with the areas of the other overlapping regions to determine an area difference for each. The Examiner therefore relied on MAHDAVIEH et al. to teach comparing each repeated image pattern with another to determine their area difference. However, there is no motivation to combine DOKE et al., teaching inspection of contact lenses (which are circular and have smooth outer edges), with MAHDAVIEH et al., teaching inspection of machine components having complex geometric shapes (e.g., gears). Therefore, withdrawal of the rejections based on any combination of DOKE et al. and MAHDAVIEH et al. is respectfully requested.

Dependent claims 5-8 are allowable at least because they depend, directly or indirectly, from independent claims 2 and 4, respectively, which Applicants submit have been shown to be allowable.

In addition, with respect to claims 6 and 8, the Examiner admitted that the combination of DOKE et al. and MAHDAVIEH et al. do not teach a band pass filter of the imaging system to filter out light having wavelengths different from the wavelengths of light used by the light box. The Examiner therefore relied on KNOLLENBERG et al. in combination with DOKE et al. and MAHDAVIEH et al. to teach this element. However, there is no motivation for the combination, since KNOLLENBERG et al. is entirely directed to detecting defects and contamination on flat surfaces, as opposed to defects along the edges of components. Moreover there is no apparent need for a light box in either DOKE et al. or MAHDAVIEH et al.

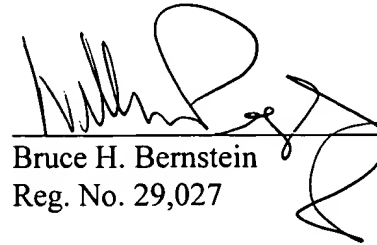
In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of previously asserted rejections set forth in the Official Action of April 5, 2004, together with an indication of the allowability of all pending claims, in due course. Such action is respectfully requested and is believed to be appropriate and proper.

Any amendments to the claims in this Reply, which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

P20987.A04

Should the Examiner have any questions concerning this Reply or the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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June 24, 2004
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